STATEMENT OF BASIS

Monarch Ceramic Tile, Inc.
Florence, Alabama
Lauderdale County
706-0004

Introduction

On March 21, 2018, the Department received an application from the above referenced facility to modify their Major Source Operating Permit (MSOP) 706-0004. Monarch operates a tile manufacturing facility in the city of Florence, Alabama. The facility is allowed to operate 8,520 hours per year. Based on the application, this facility is a potential major source for carbon monoxide (CO).

The facility proposes to change a parameter found in the compliance assurance monitoring (CAM) requirements for the wet scrubber controlling Spray Dryer 1. The facility also proposes to add a previously unpermitted portable tile crusher to their MSOP.

Description

The MSOP currently defines an excursion as a pressure loss of less than 5.4 in H_2O. Based on the manufacturer's recommended pressure minimum, the facility has proposed that an excursion be defined as a pressure loss of less than 2.0 in H_2O. No increase in emissions or loss of functionality would be expected as a result of this change.

The facility received a letter dated December 27, 2016, stating that no air permit would be required for the operation of a 30 TPH portable tile crusher with a diesel generator. This crusher would be shared with various other facilities and would be brought onsite a few months each year. The letter stated that Monarch should submit an application within one year of startup to add the unit to their MSOP. The following is an assessment of the requirements and expected emissions for the crusher.

30 TPH Tile Crusher with Diesel Generator

Scrap tile is stored onsite in a bunker under cover. The custom-built CEMCO portable crusher would be brought onsite to crush this scrap tile. The crusher uses wet suppression to minimize emissions. This unit is run by a portable 400 hp diesel-fired generator. This unit would not be subject to 40 CFR 60 Subpart OOO, "*Standards of Performance for Nonmetallic Mineral Processing Plants*", since fired scrap tile does not meet the definition of a nonmetallic mineral described in this subpart. The generator would not be subject to 40 CFR 60 Subpart IIII, *"Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"* or 40 CFR 63 Subpart ZZZZ, *"National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"*, since it is portable and would not meet the definition of a stationary engine.

Emission Standards

- Particulate Matter and Opacity:

    - Particulate emissions from this unit shall not exceed the level determined by the formula:

      $$E = 17.31(P)^{0.16} \quad (P \geq 30 \text{ tons/hr})$$

      where E = Emissions in pounds per hour and P = Process weight per hour in tons per hour.

      (ADEM Admin. Code r. 335-3-4-.04)

    - The crusher shall not discharge particulate of an opacity of more than one 6-minute average greater than 20% in any 60-minute period. At no time shall it discharge a 6-minute average opacity of particulate greater than 40%.

      (ADEM. Admin. Code r. 335-3-4-.01(1))

    - The facility shall use wet suppression to control fugitive emissions from the crusher.

      (ADEM Admin. Code r. 335-3-4-.02*)*

- Sulfur Dioxide (SO2):

    - The diesel generator shall not emit sulfur oxides, measured as sulfur dioxide, in excess of 4.0 lb/MMBtu of heat input.

      (ADEM Admin. Code r. 335-3-5-.01)

Expected Emissions

Emissions are based on AP-42 emission factors. The facility requested a PSD avoidance limit for this unit of 1,000 hours of operation per consecutive 12-month period.

Pollutant	lbs/hr	TPY
PM	11.75	5.88
PM_{10}	3.76	1.88
$PM_{2.5}$	0.88	0.44
SO_2	0.82	0.41
NO_x	12.40	6.20
CO	2.67	1.34
VOC	1.01	0.50

Periodic Monitoring and Compliance Assurance Monitoring (CAM)

This unit is not subject to CAM because uncontrolled emissions do not exceed major source thresholds.

- The facility shall maintain records of the monthly and rolling 12-month total of hours of operation for this unit.

APPENDIX

40 CFR 64
Compliance Assurance Monitoring (CAM) Requirements

CAM Plan for Wet Venturri Scrubber at Emission Point SD-1

	Parameter No.1	**Parameter No. 2**
I. Indicator	Visible Emissions (VE)	Pressure Differential (ΔP)
A. Measurement Approach	1. Trained and qualified personnel shall perform a weekly VE inspection. If visible emissions are observed, a visible emissions observation (VEO) shall be conducted within 30 minutes in accordance with 40 CFR 60, Appendix A, Method 9. The Method 9 observation shall be conducted for a minimum of twelve (12) minutes.	1. A properly maintained and operated device shall be utilized to measure the pressure loss across the unit daily. The device shall be located at eye level and be easily accessible for inspections by Air Division and plant personnel.
II. Indicator Range	1. While the unit is in operation, an excursion is defined as an average opacity during the Method 9 opacity reading which exceeds twenty (20%) percent. 2. Excursions trigger an inspection, corrective action, and a reporting requirement. 3. Corrective action must be initiated within two (2) hours following an excursion.	1. While the unit is operating, an excursion is defined as a pressure loss of less than 2.0 inches H_2O. 2. Excursions trigger an inspection, corrective action, and a reporting requirement. 3. When a pressure loss excursion occurs, corrective action shall be initiated within two (2) hours to identify and correct the problem.

III. Performance Criteria		
A. Data Representativeness	1. Inspections shall be made at the stack. Visual observations performed at emission points (exhaust stack SD-1).	1. A pressure loss reading is the measurement of the pressure differential between inlet and outlet of the baghouse. The minimum accuracy of the device is $\pm$ 0.5 in. H_2O.
B. Verification of Operating Status	N/A	N/A
i. QA/QC Practices and Criteria	1. Trained and qualified personnel shall perform the visible inspection.	1. The differential pressure gauge shall be calibrated annually.
C. Monitoring Frequency	1. Visible emissions observation shall be made weekly while each unit is in operation.	1. Pressure loss shall be measured daily while the unit is in operation.
D. Data Collection Procedures	1. Manual log entries based on weekly VE observation. Observation will be recorded along with the date, time, emission point designation, name of the observer, if VE's are observed. If VE's are observed, a Method 9 opacity reading shall be conducted. In addition to the information required by Method 9 the expiration date of the evaluator's certification shall be recorded and any corrective actions taken shall be recorded.	1. Manual log entries based on gauge readings. Pressure loss will be recorded daily along with the date, time, and name of the observer.
E. Averaging Period	1. VE observations are instantaneous. If a Method 9 is required, then observations are a six (6) minute average.	1. Pressure loss readings are instantaneous.